Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)

2. (Currently Amended) The ~~mature protein~~ BMP antagonist according to claim 16, wherein the chemical modification for said methionine residue is an oxidization reaction.

3. (Currently Amended) The ~~mature protein~~ BMP antagonist according to claim 2 in which four methionine residues are oxidized and having the amino acid sequence of SEQ ID NO 5.

4. (Currently Amended) The ~~mature protein~~ BMP antagonist according to claim 16, wherein the chemical modification for said methionine residue is an alkylation reaction.

5. (Currently Amended) The ~~mature protein~~ BMP antagonist according to claim 4 wherein the alkylation reaction is S-carboxymethylation in which at least one methionine residue is S-carboxymethylated and having the amino acid sequence of SEQ ID NO 6.

6. (Currently Amended) The ~~mature protein~~ BMP antagonist according to claim 16, wherein the chemical modification for said tryptophane residue is an allylsulphenylation reaction.

7. (Currently Amended) The ~~mature protein~~ BMP antagonist according to claim 6 in which two tryptophane residues are allylsulphenylated and having the amino acid sequence of SEQ ID NO 7.

8. (Currently Amended) The ~~mature protein~~ BMP antagonist according to claim 16, wherein said mature human MP52 is a dimer protein.

9. (Currently Amended) A BMP antagonist with antagonistic activity against at least one BMP protein selected from the group consisting of MP52, BMP-2, BMP-4 and BMP-7 ~~mature protein having an antagonistic activity against bone morphogenetic proteins,~~ obtained by converting at least one residue of tryptophane residues existing in the amino acid sequences of mature human BMP-2 (SEQ ID NO 2), mature human BMP-4 (SEQ ID NO 3) or mature human BMP-7 (SEQ ID NO 4) to a hydrophilic residue by chemical modification, or replacing said residues with a hydrophilic amino acid residue or a polar amino acid residue.

10. (Currently Amended) A BMP antagonist with antagonistic activity against at least one BMP protein selected from the group consisting of MP52, BMP-2, BMP-4 and BMP-7 ~~mature protein having an antagonistic activity against bone morphogenetic proteins,~~ obtained by replacing at least one amino acid residue of three hydrophobic amino acid residues, among said hydrophobic amino acid residues relating to a receptor binding site in the amino acid sequences of mature human BMP-2 (SEQ ID NO 2), mature human BMP-4 (SEQ ID NO 3), or mature human BMP-7 (SEQ ID NO 4), which are

located in positions corresponding to those of methionine residues located in 30th, 71st, and 74th positions of the amino acid sequence of mature human MP52 (SEQ ID NO 1) with a hydrophilic amino acid residue or a polar amino acid residue.

11. (Currently amended) The ~~mature protein~~ BMP antagonist according to claim 9, wherein said mature human BMP-2, mature human BMP-4, or mature human BMP-7 is a dimer protein.

12. (Currently Amended) ~~An agent for therapy and/or prevention of symptoms of ectopic ossification which is related to BMPs,~~ A therapeutic agent containing a ~~mature protein~~ BMP antagonist according to claim 16 ~~as an effective ingredient showing an antagonistic activity against a bone morphogenetic protein~~.

13. (Currently Amended) ~~An agent for therapy and/or prevention of symptoms of metabolic diseases with calcification wherein said disease is to the expression of BMPs, related~~ A therapeutic agent for therapy of diseases due to the expression of MP52, BMP-2, BMP-4 and/or BMP-7 containing a ~~mature protein~~ BMP antagonist according to claim 16 as an effective ingredient~~, showing an antagonistic activity against a bone morphogenetic protein~~.

14. (Canceled)

15. (Cancelled)

16. (Currently amended) A ~~mature modified protein~~ BMP antagonist with antagonistic activity against at least one BMP protein selected from the group consisting of MP52, BMP-2, BMP-4 and BMP-7 obtained by converting at least one methionine or tryptophan residue existing in the receptor binding site of mature human MP52 (SEQ ID NO:1) to a hydrophilic residue by chemical modification, or replacing said residues with a hydrophilic amino acid residue or a polar amino acid residue.

17. (Canceled)

18. (Previously presented) A mature modified protein obtained by converting at least one methionine residue at position 30, 71 or 74 or at least one tryptophan residue existing in mature human MP52 (SEQ ID NO:1) to a hydrophilic residue by chemical modification, or replacing said residues with a hydrophilic amino acid residue or a polar amino acid residue, wherein said mature modified protein has antagonistic activity against at least one BMP protein selected from the group consisting of MP52, BMP-2, BMP-4 and BMP-7.

19. (Currently amended) A mature, modified protein ~~having an antagonistic activity against bone morphogenetic proteins,~~ obtained by converting at least one methionine or tryptophane residue existing in the receptor binding site of mature human MP52 (SEQ ID NO 1) to a hydrophilic residue by chemical modification, or replacing said residues with a hydrophilic amino acid residue or a polar amino

acid residue, wherein said mature modified protein has antagonistic activity against at least one BMP protein selected from the group consisting of MP52, BMP-2, BMP-4 and BMP-7.

20. (New) A method for antagonizing MP52, BMP-2, BMP-4 and BMP-7, comprising administering to a patient in need thereof, an effective amount of a mature modified protein according to claim 16.

21. (New) The method according to claim 20, wherein said patient is suffering from ectopic ossification which is due to ectopic expression of MP52, BMP-2, BMP-4 and/or BMP-7.

22. (New) The method according to claim 20, wherein said patient is suffering from a metabolic disease with calcification.

23. (New) The method according to claim 22, wherein said metabolic disease with calcification is calcification of arterial sclerosis.